#### 0-99 Patterns

Ι

You need: 0-99 patterns

- 1. Choose a 0-99 pattern, figure out the rule, and write it.
- 2. Check your answer. If you disagree, talk with the person who made the rule.
- 3. Do this for at least 5 patterns.
- P.S. If you'd like, make other puzzles, put them in your folder, and I'll add them to the class supply.

#### 0-99 Chart

0		2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

### **Conservation of Number**

#### **Materials**

- 18 tiles(could also be cubes or poker chips)
   10 blue,8 red
- 1. Establish Equivalence One to one correspondence OOOOOOO (Y) (N)

2. Group vs. Row (more red, more blue, same num.)
Reason:

3. Short row vs. Long Row (more red, more blue, same num.)
Reason:

### RESPONSE SHEET for Conservation of Number $(N_1)$

Interviewer:		Date:	<u>.                                  </u>
Subject I.D.:	_ Age:	yrs	mons
PART A — Establishing Equivalence			· ·
S made the 1-to-1 correspondence: Yes _	No	(Terminate)	·
PART B — Group versus Row		·	
S's Response: More in Row More in Gro Same	up		
Reason:			
PART C — Short Row versus Long Row  S's Response: More in Long Row More Same Reason:	in Short I	₹ow	

Response Category:

Assessment Task: The child is presented with a pile of 15-30 counters and is asked first to estimate and then to find out how many.

After the child has counted two different piles successfully, he or she is asked to tell how many there are when one counter at a time is added and then when one counter at a time is taken away. Beginning Number Concepts: Focus on Counting

		:
Present the child with a pile of		
25-30 counters.	When estimating:	When estimating:
	Is unwilling to estimate.	Is unwilling to estimate
Ask, "How many do you think there	Makes utreasonable estimates	Makes unreasonable estimates
arc ya	(Note if too high or too low).	(Note if too high or too low).
	Makes reasonable estimates.	Makes reasonable estimates.
	To think the cotto Company of Contraction	
	Adjusts estimates when gets more information.	Adjusts estimates when gets more information.
Could you find out?		
	When counting a group of objects:	When counting a group of objects:
If the child is unsuccessful working	Counts faster or slower than points, (no one to	Counts faster or slower than points, (no one to
with numbers this large, take enough	otte correspondence).	one correspondence).
counters away to make a smaller group	Counts one to one, but loses track.	Counts one to one, but loses track.
If the child is successful, take away	Is inconsistent but doesn't notice.	is inconsistent but doesn't notice.
enough to end up with 18 or so and ask,	Has a way of keeping track.	Has a way of keeping track.
"Now how many?"	Counting is generally accurate but it takes effort,	Counting is generally accurate but it takes clion,
,	(Hesitates or recounts).	(Flesitates or recounts).
After the child has successfully counted	Counts accurately with ease.	Counts accurately with ease.
a group, add 3 or 4 one counters one at		
_	When one is added:	When one is added:
DOW'?"	Guesses,	Guesses.
	Counts to find out how many.	Counts to find out how many
Then take away several counters, one	Knows how many without counting.	Knows how many without counting.
connier at a time, each time asking,		
	When one is removed	When one is removed
(Pay special attention when you take	Gucsses.	
away from the numbers between 20 and	Counts to find out how many.	Counts to find out how many.
	Trace of the standard community	

Student's Name

Place Value Concepts: Focus on Numbers as Tens and Ones

understanding of conservation, counting by groups, and adding or subtracting ten Assessment Task: The child is presented with 35-40 counters and asked to first estimate and then find out how many tens and ones there are. After the child has determined how many tens and ones there are, they are asked a series to questions to determine their

Number relationships  Figures out ten more.  Knows without counting.  Figures out ten less.	Number relationships  Figures out ten more.  Knows without counting.  Figures out ten ten founding.  Knows without counting.	away
Conservation of number:  Counts to determine the total.  Estimates a different number, moves one at a time and counts by 5's (or 2's) to determine the amount.  Estimates a different number, mad then counts correctly by 5's (or 2's) to determine the amount.  Kaows without counting.	Counts to determine the total.  Estimates a different number, moves one at a time and counts by 5's (or 2's) to determine the amount.  Estimates a different action and then counts correctly by 5's (or 2's) to determine the amount.  Listimates a different action and then counts correctly by 5's (or 2's) to determine the amount.  Khows without counting.	Ask, "How many will there be if we push them back together?" "How many will there be if we count them by 5's?" By 2's?" Would you check and see? "What if we add ten more? Take ten
Organizes into tens and ones and determines the quantity:  Organizes into tens and ones but counts all.  Organizes into tens and ones; then counts by tens and then counts the ones.  Knows by looking at the number of tens and ones and does not need to count.	Organizes into tens and ones and determines the quantity: Organizes into tens and ones but counts all. Organizes into tens and ones; then counts by tens and iben counts the ones. Knows by looking at the number of tens and ones and does not need to count.	after the child has make all the tens possible, ask, "How many groups of ten did you make? How many left overs?" "Does this give you an idea about how many there might be?" "Are you sure or would you like to check and see?"
Describes number as tens and ones:  The number of tens and ones predicted is not related to the estimate.  The number of tens and ones is related to the estimate.	Describes number as tens and ones:  The number of tens and ones predicted is not related to the estimate.  The number of tens and ones is related to the estimate.	How many groups of ten do you think you can make? Would you check and see how many tens you can make?
Number sense when estimating:  Is not willing to estimate or changes estimate to match answer.  Estimates but is not confident or comfortable with being  "Wrong":  Estimate is unreasonable.  Estimate is reasonable.  Estimates and then uses the information gained while counting	Number sense when estimating:  Is not willing to estimate or changes estimate to match answer.  Estimates, but is not confident or comfortable with being  "wrong":  Estimate is unreasonable.  Estimate is reasonable.  Estimates and then uses the information gained while counting to	Present the child with 35-40 counters and ask, how many counters do you think there are?

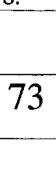
#### **Hundreds Chart**

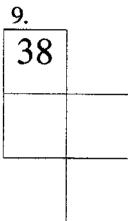
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

#### Missing Numbers from the Hundred Chart

Name				Date —
1.				2.
3.				
	16			
4.				5.
4.				
				67
6.		·	7.	
80			51	

8.

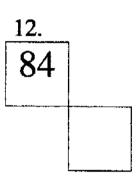




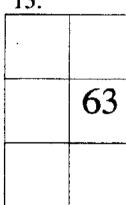


11.

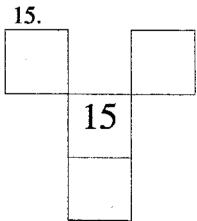




13.







### **Conservation of Number**

#### **Materials**

- 18 tiles(could also be cubes or poker chips) 10 blue,8 red
- 1. Establish Equivalence
  One to one correspondence OOOOOOO (Y) (N)

2. Group vs. Row (more red, more blue, same num.)
Reason:

3. Short row vs. Long Row (more red, more blue, same num.) Reason:

**Questions for Discussion** 

How would this information guide your instruction?

How is this information different from a standard written assessment?

Is this task similar to any task found in reading?

## RESPONSE SHEET for Conservation of Number $(N_1)$

Interv	/iewer:		·	······································	Date:	
Subje	ct I.D.:		··	Age:	yrs	mons.
PART	' A — Establisi	ning Equivalence	<u> </u>	<u> </u>		
	S made the 1	-to-1 correspondence:	Yes _	No	(Terminate)	
				·		
PART	B — Group ve	ersus Row			:	
· · ·	S's Response:	More in Row Mor	re in <i>ł</i> rou	.p		
	Reason:					·
			•		,	
PART	C — Short Ro	w versus Long Row				<del></del>
	S's Response:	More in Long Row	_ More in	n Short I	low	
	Reason:	name				

Response Category:

Student Name

Assessment Task: The child is presented with a pile of 25-30 counters and is asked first to estimate and then to find out how many. After the child has counted two different piles successfully, he or she is asked to tell how many there are when one counter at a time is added and then when one counter at a time is taken away. Beginning Number Concepts: Focus on Counting

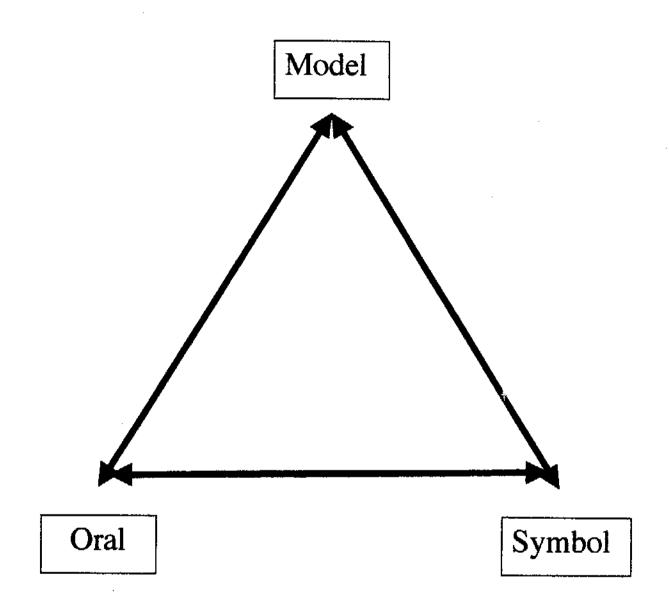
counter at a time, each time asking. "How many now?" (Pay special attention when you take away from the numbers between 20 and 11).	a group, add 3 or 4 one counters one at a time, each time asking, "How many now?"  Then take away several counters, one	Could you find out?  If the child is unsuccessful working with numbers this large, take enough counters away to make a smaller group If the child is successful, take away enough to end up with 18 or so and ask, "Now how many?"  After the child has successfully counted	Assessment Procedures:  Present the child with a pile of  25-30 counters.  Ask, "How many do you think there are?"  Adjusts estimating ObjectwOne More, One Less  Date of Observati  When estimating:  Is unwilling to Makes turease  (Note if too hime the Makes reasona  Adjusts estimating to Adjusts estimating to Adjusts estimating to Ask.
When one is removed Guesses. Counts to find out how many. Knows how many without counting.	When one is added:  Guesses.  Counts to find out how many.  Knows bow many without counting.	When counting a group of objects:  Counts faster or slower than points, (no one to one correspondence).  Counts one to one, but loses track.  Is inconsistent but doesn't notice.  Has a way of keeping track.  Counting is generally accurate but it takes effort, (Hesitates or recounts).  Counts accurately with ease.	Date of Observations  When estimating: Is unwilling to estimate.  Makes unreasonable estimates (Note if too high or too low).  Makes reasonable estimates.  Adjusts estimates when gets more information.
When one is removed  Guesses.  Counts to find out how many.  Knows how many without counting.	When one is added: Guesses. Counts to find out how many. Knows how many without counting.	When counting a group of objects:  Counts faster or slower than points, (no one to one correspondence).  Counts one to one, but loses track.  Is inconsistent but doesn't notice.  Has a way of keeping track.  Counting is generally accurate but it takes effort.  (Hesitates or recounts).  Counts accurately with ease.	When estimating: Is unwilling to estimate. Makes unreasonable estimates (Note if too high or too low). Makes reasonable estimates. Adjusts estimates when gets more information.

Place Value Concepts: Focus on Numbers as Tens and Ones

Assessment Task: The child is presented with 35-40 counters and asked to first estimate and then find out how many tens and ones there are. After the child has determined how many tens and ones there are, they are asked a series to questions to determine their understanding of conservation, counting by groups, and adding or subtracting ten.

away?"	Ask, "How man push them back "How many wi them by 5'9?" check and see? "What if we ad	after the child he possible, ask, "I ten did you make overs?" "Does at about how many "Are you sure or check and see?"	How ma think yo Would y	Present counters counters are?	Assessment
	Ask, "How many will there be if we push them back together?" "How many will there be if we count them by \$'s?" By 2's?" Would you check and see? "What if we add ten more? Take ten	after the child has make all the tens possible, ask, "How many groups of ten did you make? How many left overs?" "Does this give you an idea about how many there might be?" "Are you sure or would you like to check and see?"	How many groups of len do you think you can make? Would you check and see how many tens you can make?	the child and ask, do you ti	ment Procedures
	ere be if we re?" Would you e? Take ten	all the tens ny groups of many left you an idea night be?" /ou like to	e how many	with 35-40 how many link there	dures
Number relationships  Figures out ten more.  Knows without counting.  Figures out ten less.  Knows without counting.	Conservation of number:  Counts to determine the total.  Estimates a different number, moves one at a time and counts by 5's (or 2's) to determine the amount.  Estimates a different number and then counts correctly by 5's (or 2's) to determine the amount.  The stimates a different number and then counts correctly by 5's (or 2's) to determine the amount.	Organizes into tens and ones and determines the quantity:  Organizes into tens and ones but counts all.  Organizes into tens and ones; then counts by tens and then counts the ones.  Knows by looking at the number of tens and ones and does not need to count.	Estimates and then uses the information gained while counting to make a closer estimate.  Describes number as tens and ones: The number of tens and ones predicted is not related to the estimate.  The number of tens and ones is related to the estimate.	Number sense when estimating:  Is not willing to estimate or changes estimate to match answer.  Estimates, but is not confident or comfortable with being "wrong".  Estimate is unreasonable.	Assessment Procedures Date of Observations Date of Observations Date of Observations
Number relationships Tigures out ten more. Knows without counting. Figures out ten less. Knows without counting, counting.	Conservation of number:  Counts to determine the total.  Estimates a different number, moves one at a time and counts by 5's (or 2's) to determine the amount.  Estimates a different number and then counts correctly by 5's (or 2's) to determine the amount.  Knows without counting.	Organizes into tens and ones and determines the quantity:  Organizes into tens and ones but counts all.  Organizes into tens and ones; then counts by tens and then counts the ones.  Knows by looking at the number of tens and ones and does not need to count.	Estimates and then uses the information gained white counting to make a closer estimate.  Describes number at tens and ones:  The number of tens and ones predicted is not related to the estimate.  The number of tens and ones is related to the estimate.	Number sense when retimating:  Is not willing to estimate or changes estimate to match answer.  Estimates but is not confident or comfortable with being  "wrong?"  Estimate is unreasonable.	Date of Observations

### Model-Oral-Symbol Translations



#### **Hundreds Chart**

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100